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DESCRIPTION: **Combined Modification Document –
Modification Note 78
TCTO 31P1-4-108-626
Deployment of Base Data Distribution
Server Hardware at DoD Radar
Product Generator**

DATE OF ISSUE: July 14, 2004

QUANTITY OF ISSUE: EACH

**DEPLOYMENT OF BASE DATA DISTRIBUTION
SERVER HARDWARE AT DOD RADAR PRODUCT
GENERATOR**

**DOPPLER METEOROLOGICAL RADAR
WSR-88D**



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COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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NWS APPROVAL:

 **Mark S. Paese**
Signature valid


Digitally signed by Mark S. Paese
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Date: 2004.07.29 10:09:11 -04'00'

Date _____

Mark S. Paese
Director, Maintenance, Logistics
and Acquisition Division

DoD APPROVAL:

BY ORDER OF THE SECRETARY OF THE AIR FORCE


Digitally signed by Ed Berkowitz
DN: CN = Ed Berkowitz, C = US, O = ROC, OU = Program Branch
Reason: I am approving this document
Date: 2004.08.02 10:08:18 -05'00'

Date _____

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Radar Operations Center
TOMA

JOHN P. JUMPER, General, USAF
Chief of Staff

1. SUBJECT

Deployment of Base Data Distribution Server (BDDS) Hardware at DoD Radar Product Generator (RPG).

2. PURPOSE

This modification upgrades the RPG cabinets with BDDS hardware at all WSR-88D locations, and converts each RPG cabinet to an NWS configuration. This component of the NEXRAD is being updated to take advantage of commercial advancements in computer hardware and software. These updates will include changes to communications and processing equipment to allow collection, distribution, and archiving of NEXRAD system base data. This modification will be accomplished by a team from the Radar Operations Center (ROC). The authority for this modification is ECP 0157, Add Necessary Equipment Allowing Remote BDDS Access at all DoD NEXRAD Sites.

The ROC staff will coordinate with the sites listed in [ATTACHMENT 1](#) on installation dates. ROC coordinators and deployment team members will coordinate with agency points of contact and local site staff to move, deactivate, or otherwise modify circuits prior to arrival of installation team.

The ROC will coordinate with the Air Force Logistics Command (AFLC) for installation team travel, arrival, lodging, and vehicle requirements.

The ROC deployment team will coordinate with ROC Retrofit Management Team for BDDS hardware shipment and arrival including making certain that hardware has been shipped to the site prior to installation team arrival and that arrangements have been made for delivery of the RPG equipment to shelters as required.

The WSR-88D Hotline will be the single POC for the installation team. The Hotline will pass on all relevant information to the ROC deployment staff.

For additional information concerning this document, contact the Radar Operations Center (ROC) Hotline, Norman, OK; phone number: (800) 643-3363 or (405) 366-2980 or by e-mail at NEXRAD.Hotline@noaa.gov. An electronic copy of this document can be found at the following Internet address:
www.roc.noaa.gov/ssb/sysdoc/techman/tmlinks.asp

3. SITES AFFECTED

See [ATTACHMENT 1](#).

4. ESTIMATED COMPLETION DATE

This modification must be reported completed no later than 60 days after receipt of this document and the date the kit was shipped from the National Logistics Support Center (NLSC).

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5. EQUIPMENT AFFECTED

Radar Product Generator Group.

6. SPARES AFFECTED

Sites that currently have a Remote BDDS will turn in the following equipment to the property manager for proper disposition.

Nomenclature	Ref Des	Part Number	Qty
Monitor, 21-inch	71A2	2210036-201	1
Monitor, 17-inch	70/170A4, 72A2, 80A7	2210035-201	1
Mouse	70/170A6, 71A4, 74A4	2210017-204	1
Keyboard	70/170A5, 71A3, 72A3	2210017-203	1
Monitor	5A33	5D	1
CPU Terminal	5A32	2300000-301	1
Mouse	5A36	141189-401	1
Keyboard	5A34	247432-001	1

7. MODIFICATION ACCOMPLISHED BY

A team from the ROC will perform the installation. At DoD locations, one technician may be required to assist the ROC installation team. This is due to the distance between the BDDS and the Master System Control Function (MSCF). The site electronics technicians are responsible for reporting the completion of this modification.

8. MATERIAL REQUIRED

All parts necessary to perform the modification will be provided by the ROC installation team.

9. SOURCE OF MATERIALS

Kits are requisitioned by the ROC Retrofit Management Team and shipped at no cost to the site.

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED

Not applicable.

11. TIME AND PERSONNEL REQUIRED

Work Phases	Work-hours
Unpacking	0.5
Disassembly	2.0
Installation	4.0
Assembly	0.0
Operational Check	0.5
Total Work-hours	8.0

12. DOCUMENTS AFFECTED

a. Technical Manual, System Description, Revision 4, dated 31 March 2003

NWS: EHB 6-500, Change 2

DoD: AFTO 31P1-4-108-1, Change 2

FAA: TI 6345.1 V1, Change 2

Navy: EM400-AA-MMM-010/WSR-88D, Change 2

b. Technical Manual, Illustrated Parts Breakdown, Revision 8, dated 30 June 2004

NWS: EHB 6-501

DoD: AFTO 31P1-4-108-4

FAA: TI 6345.2 V1

Navy: EM400-AB-IPB-010

c. Technical Manual, Work Unit Code, Revision 1, dated 1 November 2001

NWS: EHB 6-502, Change 4

DoD: AFTO 31P1-4-108-06, Change 4

FAA: TI 6345.1 V3, Change 4

Navy: EM400-AC-WUC-010, Change 4

- d. Technical Manual, Inspection, Lubrication, and Maintenance Requirements Manual, Revision 2, dated 1 June 2002**
NWS: EHB 6-503, Change 4
DoD: AFTO 31P1-4-108-6, Change 4
FAA: TI 6345.1 V4, Change 4
Navy: EM400-AM-MOO-010, Change 4
- e. Technical Manual, Preventive Maintenance Inspection Work Cards, Revision 4, dated 15 June 2004**
NWS: EHB 6-503-2
DoD: AFTO 31P1-4-108-6WC-8
FAA: TI 6345.1 V4
- f. Technical Manual, Maintenance Instructions, Radar Data Acquisition (RDA), Revision 3, dated 15 September 2004**
NWS: EHB 6-510
DoD: AFTO 31P1-4-108-152
FAA: TI 6345.1 V7
- g. Technical Manual, Maintenance Instructions, Radar Product Generator (RPG), Revision 2, dated 30 June 2004**
NWS: EHB 6-525
DoD: AFTO 31P1-4-108-452-1
FAA: TI 6345.1 V49
- h. Technical Manual, Operations Instructions, Radar Product Generation (RPG), Revision 2, dated 29 March 2004**
NWS: EHB 6-526, Change 1
DoD: AFTO 31P1-4-108-451-1, Change 1
FAA: TI 6345.1 V50, Change 1
- i. Technical Manual, Maintenance Instructions, WBC (Wideband Communications) Group, dated 1 July 2001**
NWS: EHB 6-545, Change 1
DoD: AFTO 31P1-4-108-2, Change 1
FAA: TI 6345.1 V51, Change 1

13. VERIFICATION STATEMENT

This modification was successfully installed at Beale AFB, CA.

14. DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS

The team from the ROC will package any removed hardware that will be returned to the ROC for reuse. The site will ship the equipment to the ROC.

15. PROCEDURES

It is the responsibility of the site to report the completion of this modification.

16. FAA DISTRIBUTION

Not applicable.

17. CHANGES TO TABLE OF CONTENTS (FAA)

Not applicable.

18. RECOMMENDATIONS FOR CHANGES (FAA)

Not applicable.

19. REPORTING INSTRUCTIONS

a. NWS

Report completed modification on WS Form A-26, Engineering Management Reporting System Maintenance Record, according to the instructions in NWS Instruction (NWSI) 30-2104, Engineering Management Reporting System (EMRS), part 4 and Appendix E. Include the following information on the WS Form A-26:

- An Equipment Code of RPG in Block 7.
- The appropriate serial number in Block 8.
- A Mod No. of 78 in Block 17a.

A sample EMRS report is provided as ATTACHMENT 3.

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b. DoD

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.

Complete [ATTACHMENT 2](#), and return the information to the ROC by one of the four methods below:

- (1) Mail Address: Program Branch, Retrofit Management Team
WSR-88D Radar Operations Center
3200 Marshall Ave., Suite 101
Norman, Oklahoma 73072-8028
- (2) Fax Number: (405) 573-3480
ATTN: Retrofit Management Team
- (3) E-mail Address: NEXRAD.Logistics@noaa.gov
- (4) Web Version: <http://www.roc.noaa.gov/ssb/logistics/completion.asp>

ATTACHMENT 1

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ALTUS AFB	FREDERICK, OK	RPG	FDR	FE4419
ALTUS AFB (WFO Norman)	NORMAN, OK	RBDDS	OUN	WP9921
ANDERSEN AFB	ANDERSEN AFB, GU	RPG	UAM	FE5240
BEALE AFB	OROVILLE, CA	RPG	BBX	FE4686
CAMP HUMPHREYS	CAMP HUMPHREYS, KO	RPG	KSGR4	FI5294
CANNON AFB	FIELD, NM	RPG	FDX	FE4855
COLUMBUS AFB	GREENWOOD SPRINGS, MS	RPG	GWX	FE3022
COLUMBUS AFB (WFO Jackson)	JACKSON, MS	RBDDS	JAN	WP9235
DOVER AFB	ELLENDALE STATE FOREST, DE	RPG	DOX	FE4497
DYESS AFB	MORAN, TX	RPG	DYX	FE4661
EDWARDS AFB	BORON, CA	RPG	EYX	FE2805
EGLIN AFB	RED BAY, FL	RPG	EVX	FE2823
FT CAMPBELL	TRENTON, KY	RPG	HPX	FY4812
FT DRUM	MONTAGUE, NY	RPG	TYX	FY4846
FT HOOD	GRANGER, TX	RPG	GRK	FY4824
FT POLK	FT POLK, LA	RPG	POE	FY4825
FT RUCKER	ECHO, AL	RPG	EOX	FY4805

ATTACHMENT 1 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
HOLLOMAN AFB	RUIDOSO, NM	RPG	HDX	FE4801
KADENA AB	KADENA AB, JA	RPG	ODNR5	FH5270
KEESLER AFB OPS TRNG	D'IBERVILLE, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	RPG	BIX	FE3010
KUNSAN AB	KUNSAN AB, KO	RPG	KJKR4	FH5284
LAJES AB	SANTA BARBARA, AZR	RPG	PLAL3	FE4486
LAUGHLIN AFB	BRACKETVILLE, TX	RPG	DFX	FE3099
MAXWELL AFB	CARRVILLE, AL	RPG	MXX	FE3300
MINOT AFB	DEERING, ND	RPG	MBX	FE4528
MOODY AFB	SOUTH STOCKTON, GA	RPG	VAX	FE4830
ROBINS AFB	JEFFERSONVILLE, GA	RPG	JGX	FE2067
ROC DOD RPG (KREX)(WFO Norman)	NORMAN, OK	RPG		WG9420
VANCE AFB	CHEROKEE, OK	RPG	VNX	FE3029
VANCE AFB (WFO Norman)	NORMAN, OK	RBDDS	OUN	WP9921
VANDENBERG AFB	ORCUTT, CA	RPG	VBX	FE4610

ATTACHMENT 2

RBDDS REMOVAL AND BDDS INSTALLATION COMPLETION FORM

***** **DoD Only will complete and return this form** *****
NWS report completion through EMRS

Site Name: _____

Site Identifier: _____

Total Time to Complete this Modification Document: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Date Completed: _____

Problem(s) Encountered:

Upon completion of this form, return the information to the ROC using one of the four methods below:

1. Mailing Address: Program Branch, Retrofit Management Team
WSR-88D Radar Operations Center
3200 Marshall Ave., Suite 101
Norman, OK 73072-8028
2. FAX Number: (405) 573-3480
ATTN: Retrofit Management Team
3. E-mail Address: NEXRAD.Logistics@noaa.gov
4. Web Version: <http://www.roc.noaa.gov/ssb/logistics/complete/>

Attachment 3 - Sample EMRS Report

A26 Detail Form - ESCM2, SILVER SPRING, MD :: JOHN MERHI - Microsoft Internet Explorer

GENERAL INFORMATION

WFO* FFC Document No.* FFC40615000

1. Open Date 06/15/2004 Open Time 08:00 2. Op Initials WSH 3. Response Priority
☐ Immediate ☐ Low
☒ Routine ☐ Not Applicable 4. Close Date 06/15/2004 Close Time 15:00

5. Maintenance Description 440 characters left RADAR, WSR-88D
Assist ROC team with deployment of BDDS hardware at DoD RPG.

EQUIPMENT INFORMATION

6. Station ID* FFC 7. Equipment Code RPG 8. Serial Number DC002 9. TM M 10. AT M 11. How Mal 999

Alert: Time Remaining: 7:00
(For Block 12 use only)

12. EQUIPMENT OPERATIONAL STATUS TIMES

a. Fully Operational		b. Logistic Delay		c. All Other		d. Logistic Delay		e. All Other	
Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes	Hours	Minutes
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

13. PARTS USAGE and CONFIGURATION MANAGEMENT REPORTING

ASN	Vendor Part No. (New Part)	Serial Number (Old Part)	Serial Number (New Part)	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="button" value="New Row"/>
				<input type="button" value="Delete Row"/>

14. WORKLOAD INFORMATION

a. Routine	b. Non-Routine	c. Travel	d. Misc	e. Overtime	
Hours	Minutes	Hours	Minutes	Hours	Minutes
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> 7 <input type="text"/> 00	<input type="text"/>	<input type="text"/>

MISCELLANEOUS INFORMATION

15. Maintenance Comments 615 characters left
Assist ROC team with deployment of BDDS hardware at DoD RPG and verify system is working upon Mod completion, I.A.W. NEXRAD Mod Note 78

16. Tech Initials RAB

17. SPECIAL PURPOSE REPORTING INFORMATION

a. Mod No. 78 b. Mod Act/Deact Date 06/15/2004 c. Block C d. Trouble Ticket No. e. Block E

Done Internet